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Mr. Kenneth D. Landau
Assistant Executive Officer
California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Re: Comments to Proposed Waste Discharge Requirements for City of Tracy

Dear Sir:

The following are South Delta Water Agency's comments to the proposed waste discharge requirements ("Proposed Order," or "Order") for the City of Tracy's proposed increase in discharges from their waste water treatment facility.

The salinity problem in the South Delta has been present since the CVP began operations nearly fifty years ago. All beneficial uses of the River and the Delta should be allowed. This includes consumptive uses, which naturally concentrate the various constituents in the water, and drainage back to the River as permitted by law. However, a distinction must be made between those who consume water and concentrate such things as slats, and those who add salts. Dischargers such as the City of Tracy add significant additional salts and must address these additions as conditions to their ability to discharge. Although the State and Federal projects initially caused the problem, that is not a reason to allow others to exacerbate the problem. It is reasonable to allow any discharger time to address a discharge problem, but the issue cannot be deferred indefinitely. For example, the Order notes at one point there is no available data regarding real-time flows which would be used to analyze mixing of the City's effluent. Why hasn't the City been doing its own monitoring of such flows. Its discharges have been in excess

of the current 0.7/1.0 EC standard and were in excess of the previous 500 TDS standard making the mixing issue an old problem. Specific comments are as follows:

1. The Order lists Section 122.44(d) of the Federal Regulations as requiring limitations on pollutants that will contribute to an exceedance of numeric water quality standards. The Regional Board should better explain its reasoning for allowing salinity (EC) discharges well in excess of the standard into areas that will likely have regular exceedances of that standard.

2. On pages 3-4, the list of impairments for the eastern Delta omits EC and TDS.

3. In referring to the "Anti-Backsliding" requirements of the CWA, the Order states on page 5 that its effluent limitations are at least as stringent as the previous limitations. This is difficult to understand. Attachment F includes a description of existing requirements. This description lists no limit on EC discharges (which doesn't seem correct), and includes the "highest average monthly discharge." For EC, this highest average is 1753 uS/cm, footnoted as being the "Highest Annual Average." From this it seems that the Order allows an increase in EC discharges of 30% (from 1753 to 2265). This does not appear to comply with the Anti-Backsliding, or non-degradation policies of State and Federal law.

4. The Order requires monitoring at Location M-001. From the description in Attachment E, Section IV, this location appears to be somewhere near the actual outfall. However, Figure E-1 does not list any M-001 location, but specifies a receiving water monitoring station at "R-001" located at the head of Old River. The Order should clarify in the text, on page E-2 and E-3 the locations of all the sites.

5. Section V. beginning on page 11 lists receiving water limitations, but omits salinity/EC. The Southern Delta has three compliance locations for EC as set forth in the 1995 Water Quality Control Plan and implemented in D-1641. If the Regional Board chooses to deal with the salinity issue later in the Order, it should clarify in Section V. why EC is not addressed in that section.

6. On page 13, the Order lists receiving water limitations for pesticide discharges. These criteria should be at least as stringent as those currently imposed (and monitored) under the Ag Waiver program.

7. Pages 19 and 21 identify a reporting condition which requires the discharger to investigate the "appropriate EC levels to protect the beneficial uses of agricultural supply in areas irrigated with Old River waters in the vicinity of the discharge." The report seeks information on "sodium adsorption ratios" "effects of rainfall and flooding on leaching" and how "climate, soil chemistry" and "background water quality" may affect agricultural beneficial uses. Such an

investigation and its results are contrary to not only existing water quality objectives, but also to the statutory process by which water quality objectives are set. Embarking on a procedure by which the Regional Board may allow discharges in excess of establish and adjudicated standards is contrary to the legal requirements of both the Porter-Cologne Act and the Clean Water Act.

The water quality necessary to protect agricultural beneficial uses in the South Delta was determined through an open and public process which encompassed thousands of man-hours, extensive technical review, and evidentiary hearing before the State Water Resources Control Board. The information sought has already been produced and is part of the SWRCB's records. Attached hereto are SDWA's exhibits, testimony and transcripts for a CDO hearing conducted earlier this year before the SWRCB. As the materials indicate, the conditions in the South Delta are such that the diversity of soils prevent adequate leaching and result in the build-up of salts in the soils. The only confusion on this issue is the Regional Board's apparent desire to ignore the data.

The Regional Board can not attempt to escape the legal process involved and requirements of issuing waste discharge permits by having a permittee produce its own analysis of what water quality protects any particular beneficial use. The standards have been set; neither the Regional Board or a discharger can unilaterally change them. If the Regional Board chooses to dely or excuse compliance with water quality standards it may do so only by complying with the law. It can't do so by conducting (or ordering) its own non-public study as to what is necessary to protect beneficial uses. The subject provision must be stricken or it will be overturned in a judicial review of the final Order.

8. On page 22, the Order specifies that an EC of 1350 is a reasonable intermediate goal that can be achieved in the permit term. The Order should clarify when that goal should/must be reached.

9. The Order should explain why an increase in discharges (to 10.8 mgd) should be allowed before any actions are implemented which actually address the discharge of salinity in excess of three times the current water quality standards. As written, the Order allows increases to 10.8 mgd, then up to 16mgd if the discharge for/of EC "fully protects the beneficial use of agricultural supply;" ***not*** the existing water quality objectives.

10. The Monitoring locations specified on pages E-2 and E-3 need discussion and explanation. Without any tidal barriers, the Tracy effluent has a net flow out Old River and Grant Line Canal. Even with the incoming tides, the effluent does not travel a significant distance up Old River. On the outgoing tides, the effluent travels generally downstream to the CVP export pumps and a portion eventually makes its way back into the City's' supply.

With temporary barriers, there is still a net flow downstream, though radically reduced to the point where the flow is minor. This results in a large (virtually) stagnant zone in Old River upstream of the Tracy Old River barrier to approximately the Tracy Boulevard Bridge. In this stagnant zone, DO decreases, salinity increases, and all other constituents of concern concentrate. That portion of the effluent that enters Grant Line Road joins a net flow out that channel. Again, virtually none of the effluent travels very far upstream on Old River.

With the permanent barriers (anticipated under the South Delta Improvement Plan, or "SDIP") the flows should be significantly different. The permanent barriers will either create a sufficient net flow over (downstream) the Grant Line barrier, or, may create the net flow over the Tracy Old River barrier. Either way, the program seeks to establish a sufficient net flow to maintain a flushing of the area. SDWA comments to the project address the apparent shortcomings of the plan, which include the periodic lack of flushing flows which may result in stagnant zones on low tide cycles. During those times, water will flow into the South Delta, but there will be little if any outflow flushing the salinity.

In light of this, the monitoring stations should be situated so that they can monitor the channel conditions regardless of whether barriers are in and operating or not. Monitoring at the Head of Old River would seem inappropriate, while additional stations on Old River, Doughty Cut/Salmon Slough area and Grant Line Canal would seem warranted. Further recommendations are set forth below.

11. The Order (page E-5) requires effluent be monitored for EC at a minimum of once a month. The current standard in the receiving waters is a monthly running average which is calculated by daily inputs. For receiving waters, the Order requires weekly testing (E-10). These are clearly inadequate. In order to fully monitor the salinity being discharged and its effects on local beneficial uses, it would seem proper to have numerous, continuous monitoring. Without such monitoring, the effluent could regularly be far in excess of the standard or the permit term. In addition, the receiving waters might be in excess of the standard and further discharges by the City could exacerbate (or cause) violations, thus defeating the purpose of the permit and the standard.

12. On Page E-7, the Order requires quarterly testing of chronic toxicity on three species. Under the Ag Waiver program of the Regional Board, the local Coalition is required to test at numerous sites after two winter storm events, and six times during the "irrigation" season. All these test include toxicity testing of three species. Given the continuous discharge of the City effluent, quarterly testing appears drastically inadequate.

13. The Order requires the City's supply be monitored once a year for EC. Checking the salts in the supply once a year suggests efforts to control salinity are illusory.

14. The Order references the SWRCB Anti-degradation policy set forth in Resolution 68-16. This policy requires the maintenance of high quality waters until it is demonstrated that (i) a change (degradation) is consistent with the maximum benefit to the people of the State, (ii) will not unreasonably affect beneficial uses, ***and*** (iii) will not result in quality less than that described in the Regional Board's policies. The Order states that the degradation allowed under the proposed discharge requirements meets these criteria, but does not explain how.

It states the degradation is consistent with the maximum benefit to the people of the state. We see no analysis on which such a conclusion is based. Benefit to the people is not a function of comparing how many people are harmed to how many are not. The City of Tracy's growth may be a benefit, but the cost associated with that growth must include the protection of the waters of the state. The damage to the local agriculture from increased discharges of increased salinity also has many adverse impacts to the people of the state. Again, the conclusion is not supported.

The Order also states that discharge is a necessary function of growth, but makes no effort to connect this to the Resolution 68-16 criteria. Similarly, the Order notes that the eventual permit would result in "a high level of treatment of sewage waste." Again, this may be the case, but it does not address the applicable criteria. The authors appear to be mis-characterizing an economic analysis which they assumedly think shows it is better to allow degradation than to pay for treatment. If such a conclusion is possible, it would be a necessary component of the City's EIR for its general plan or other planning and environmental documents supporting its growth. Merely stating the conclusions in the brief analysis of the Order is inappropriate and cannot substitute for a necessary follow-on EIR if the previous documents failed to analyze the adverse impacts from discharging waters with over three times the allowable EC.

The Order fails to examine the other criteria in the anti-degradation policy; not unreasonably affecting beneficial uses and not being in conflict with existing Regional Board policies. Discharges of 2265 EC when the standard is 700 EC is necessarily an unreasonable affect on agricultural beneficial uses. Even parties seeking a lessening of the standard believe 1000 EC is required to protect agriculture. Further, since the Regional Board policies currently specify 450 TDS and 700 EC, we see no way the Order can conclude it complies with Resolution 68-16.

15. The Order notes that the interim effluent limit of 2265 EC is "essentially the same as the short term secondary maximum contaminant level ... for protection of municipal and domestic supply" (2200 EC). There is no apparent reason why a municipal and domestic limit is relevant to discharges in excess of existing standards. No reason is given for allowing a greater EC than the municipal and domestic limits; having the numbers close is not in anyway meaningful.

16. Table F-1 purports to give the surface water "antidegradation" analysis. Here we find that the City's average discharge EC is 1800, not the 1753 previously referenced. Which is the true number?

The Table includes three footnotes, one of which is associated with EC, TDS, and Chloride. The footnote (b) appears to set forth an argument as to why existing water quality objectives for agricultural beneficial uses are not needed. It speculates that the agricultural beneficial users may need to permanently change their crops so that the City can discharge at over three times the standard. It also speculates that, contrary to the evidence, testimony and conclusions of the SWRCB, South Delta agricultural interests can simply change their irrigation methods and live with the higher concentrations of salt. Finally, it suggests that maintaining maximum yields is not necessary because the City of Tracy wants to grow. It is strange to have such language in the analysis of impacts to water quality. It indicates both a bias against agriculture and a lack of understanding of the issues facing the South Delta and water quality in general.

Further, the Table leaves "blank" the information for the mass loading of salts resulting from the increase and any information on the increase. It is a simple calculation to determine how much salt is in the increased discharge.

17. Attachment F, beginning on page F-15 and continuing describes the temporary and proposed barrier programs in the South Delta. It also references modeling and other investigations performed to analyze the effects of the Tracy effluent discharge to the waters of Old River and other South Delta channels. The descriptions contained some inaccuracies and fail to include the most recent and reliable information.

The temporary barrier program is not constituted to, nor does it address the water quality standards in the interior South Delta. The Bureau does operate New Melones to control salinities at Vernalis, but the downstream temporary barriers are to control water stage or level, not salinity. Initially, it was hoped that the temporary barriers would decrease salinity concentrations somewhat, but experience has shown the opposite. The barriers have moved the null zones created by the export pumps to different locations, and generally increase the scope of those nulls zones. Currently, in addition to the null zones associated with dead end channels, the temporary barriers create (nearly) null zones immediately upstream of the Tracy Old River and Middle River barriers. Prior to the high flow years of 2006 and 2005, these null zones exacerbated salt concentrations and created areas of minimal DO, resulting in local fish kills (see Dr. Fred Lee, at www.gfredlee.com).

The three agricultural barriers are sometimes installed as early as April, but operations of those barriers are always conditioned on fishery agency concerns regarding endangered and

threatened species, especially Delta smelt. Typically the Tracy Old River and Middle River barriers are installed in April but the flap gates not operated until after the HOR barrier is removed (generally post VAMP flows). The Grant Line Canal barrier is typically only partially installed and then operated thereafter, also post VAMP. This hybrid configuration provides significantly different flows than with" normal" barrier operations. Pursuant to a yearly agreement with SDWA, DWR generally always allows water to flow through the fall HOR barrier to protect downstream water levels. The above operations are not referenced in Attachment F.

The permanent barrier designs are for all practical purposes set, and not being dependent on further temporary barrier operations and analysis. The draft EIS/R for the SDIP has been released for public review, and DWR is currently preparing response to comments and finalizing the document.

Attachment F list two different modeling efforts used to analyze the effects of the project. However, the document notes that neither is reliable for this purpose. Studies calibrated during wet years only and with incorrect (partial) barrier operations are meaningless in analyzing the proposed increased discharge. Before any new permit is considered, both Tracy and the Regional Board must consult with DWR and discuss the modeling done by that agency. In the development of the SDIP DEIS/R, DWR has produced a large number of modeling runs covering a myriad of scenarios. Those efforts would certainly address (to a greater extent than does the Order) the effects on water quality and flow resulting from the proposed increase in discharges. I suggest contacting Mr. Paul Marshall of DWR (marshall@water.ca.gov); he is the project lead for the SDIP. The minimal treatment of the mixing of the large volumes of salt proposed for discharge prevents the Board from giving the matter any serious consideration.

Before the proposed permitting can go forward, the permittee and the Regional Board need to consider actions that might partially mitigate the adverse effects which will result from the increase in discharge and allowed increased in concentration of the discharge. The parties should consider such things as some sort of dilution program or other actions to decrease salinity concentrations. One such action would supporting the addition of low lift pumps to the permanent barriers which would augment the incoming tidal flows and provide mixing and dilution. Other actions may also be possible and must be investigated.

Please call me if you have any questions or comments.

Very truly yours,

JOHN HERRICK

JH/dd
Attachment
cc (w/o attachments):
Mr. Steve Bayley (City of Tracy)
Mr. Alex Hildebrand
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